WINTERS WASH
FCD GAGE ID# 5118

STATION DESCRIPTION

LOCATION – The gage site is located approximately 1/2 mile west of 395th Avenue and approximately 0.1 miles north of the Camelback Road alignment. Latitude N 33° 30' 34.7", Longitude W 112° 54' 44.9". Located in the SE1/4 SE1/4 SW1/4 S18 T2N R6W in the Hot Rock Mountain 7.5-minute quadrangle.

ESTABLISHMENT – The gage was established on July 11, 2000.

DRAINAGE AREA – 27.8 square miles, of which 19.5 square miles of drainage area is above the CAP canal.

GAGE – The recording gage is a pressure transducer type instrument. The PT is at 0.51 feet gage height, levels of April 1, 2003.

There is no staff gage at this location.

There is one crest gage at this location. The pin elevation is 0.69 feet gage height, levels of April 1, 2003.

ZERO GAGE HEIGHT – Zero gage height is arbitrarily defined as 1,120.000 feet NAVD 1988. It is defined with respect to RM-WINTER.

HISTORY – The crest cage pin was elevated by 0.5 feet on August 23, 2000 following an event on August 22, 2000. The crest gage pin was in a scour hole prior to the move. The PT was moved to a higher level in the channel on September 28, 2000. The PT had been in a scour hole at the PT/CSG location within the channel. The PT was found at gage height 0.51 feet from surveys of April 1, 2003 and September 18, 2003.

REFERENCE MARKS –

RM-WINTER is an FCD brass tablet set in concrete located about 10 feet northwest of the gage standpipe. Established July 12, 2000. Elevation 6.43 feet gage height, levels of July 12, 2000, or 1,126.43 feet NAVD 1988, levels of April 10, 2001. Northing = 914098.225 feet, Easting = 396538.596 feet. This RM was previously identified as RM1.

RP1 is the bracket to which the PT housing is attached. Elevation 0.71 feet gage height, levels of September 18, 2003.

RP2 is the upper bracket to which the PT flexible conduit is attached near the top of the left bank. Elevation 4.82 feet gage height, levels of July 12, 2000.

There are three slope area cross sections established in the reach. Two cross sections are upstream of the gage and two cross sections are downstream of the gage.

Cross section one is located approximately 180 feet upstream of the gage cross section. XS1LB is fence rail on the left bank of XS1 and hammered into the ground and painted white. Elevation 5.53 feet gage height, levels of April 10, 2001. XS1RB is fence rail on the right bank of XS1 and hammered into the ground and painted white. Elevation 5.56 feet gage height, levels of April 10, 2001.

Cross section two is located approximately at the gage cross section. XS2LB is fence rail on the left bank of XS2 and hammered into the ground and painted white. Elevation 7.00 feet gage height, levels of April 10, 2001. XS2RB is fence rail on the right bank of XS2 and hammered into the ground and painted white. Elevation 5.47 feet gage height, levels of April 10, 2001.

Cross section three is located approximately 180 feet downstream from the gage cross section. XS3LB is fence rail on the left bank of XS3 and hammered into the ground and painted white. Elevation 4.81 feet gage height, levels of April 10, 2001. XS3RB is fence rail on the right bank of XS3 and hammered into the ground and painted white. Elevation 4.61 feet gage height, levels of April 10, 2001.

CHANNEL AND CONTROL – The channel bed is mainly composed of sand and gravel with some small smooth rock. The channel is approximately 50 feet wide at the gage. The channel is straight upstream of the gage several hundred feet. Downstream of the gage the channel is straight for approximately 110 feet. Past 110 feet downstream the channel bends slightly to the right. For low flows the control would be small riffles. For larger flows, the channel becomes the control. Levels above about 4 feet gage height would begin to leave the channel and begin flooding the right overbanks, which are heavily vegetated.

RATING – The current rating is Rating #1 developed from an HEC-RAS model of surveyed cross sections. The flow was subcritical and the slope through the reach was 0.0061 feet/feet.

DISCHARGE MEASUREMENTS – Low flow direct measurements could be taken by wading near the gage cross section. A slope area reach is defined and established up and downstream of the gage cross section.

POINT OF ZERO FLOW – The PZF for the gage cross section is at approximately 0.20 feet gage height, levels of September 18, 2003.

FLOODS – The USGS recorded a flood of 3,640 cfs on September 25, 1976 at their gage approximately 1.5 miles downstream. The gage recorded a flow of 188 cfs at 1.62 feet gage height on August 22, 2000. Runoff of 510 cfs at 3.30 feet gage height occurred on July 29, 2003.

REGULATION – Some regulation may occur at the CAP crossing of Winters and Old Camp Wash.

DIVERSIONS – none known

ACCURACY – Fair at lower flows, poor at stages above about four feet gage height.

JUSTIFICATION – Monitor flows in Winters Wash for the MCDOT flooded road / barricading program.

UPDATE – July 21, 2011
D E Gardner